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**KISHIMOTO YUJI**(54) **ELECTROCHEMICAL CATALYST FOR  
EXHAUST GAS TREATMENT**

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(57) Abstract:

**PROBLEM TO BE SOLVED:** To provide an exhaust gas treatment catalyst capable of sufficiently functioning even in lean environments by electrochemically promoting oxidation reaction and reduction reaction not by simply chemical catalytic reaction just like a conventional exhaust gas treatment catalyst.

**SOLUTION:** A catalyst A1 containing a NO<sub>x</sub> absorbing substance and a NO<sub>x</sub> reduction catalyst 4, a catalyst B2 containing a hydrocarbon adsorbing substance and hydrocarbon oxidation catalyst 5, and an ion conductive solid electrolytic substance are mixed and applied to a metal honeycomb 7 to move electrons between the catalyst A1 and the catalyst B1 through a metal honeycomb 7 and to move ion through the solid electrolytic substance 6 and thus electrochemical reduction reaction and electrochemical oxidation reaction are separately promoted in the catalyst A1 and the catalyst B2, respectively.

